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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/562,798	12/29/2005	Toru Maeda	070456-0098	8704

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EXAMINER	
HARRIS, GARY D	

ART UNIT	PAPER NUMBER
1794	

MAIL DATE	DELIVERY MODE
03/18/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/562,798	MAEDA ET AL.	
	Examiner	Art Unit	
	GARY D. HARRIS	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 December 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-9 and 11-16* is/are pending in the application.

4a) Of the above claim(s) *8 and 16* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-7,9 and 11-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *9/11/2008, 12/29/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 12/12/2008 have been fully considered but they are not persuasive. Applicant has amended claims such that the limitations of claim 2 & 10 are now in independent claims 1 & 9 respectively. Examiner notes that applicant has changed the scope of the independent claims and now requires a "main component" which has necessitated new grounds of rejection.

Claims 1, 3- 7, 9, & 11-15 are examined in the instant application.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1, 3- 7, 9, & 11-15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicant's claims now require a main component consisting of at least one of aluminum, chromium, silicon, titanium, vanadium. This is new matter as examiner cannot find where "main component" is defined in the specification.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 3- 7, 9, & 11-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "main component" in claim 1 & 9 is a relative term which renders the claim indefinite. The term "main component" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Applicant is reciting the main component consisting of aluminum, chromium, silicon, titanium, vanadium and nickel. This is unclear and not supported in the specification. One skilled in the art would not know what is meant by “main component”. For example the "predominant/main component of Al_2O_3 would be oxygen because there is three oxygen atoms for every two aluminum atoms. However, on a piece of aluminum it would inherently have an oxide layer. The oxide would still have more oxygen but the main/predominant component would be aluminum.

For the purposes of evaluating the prior art, the Examiner has taken the term "main component" to mean a predominant/main component (such as aluminum) by any of mass, volume or weight percent.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 3, 4, 6, 7, 9, 12, 14 & 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Ueta et al. 2004/0126609.

As to Claim 1 & 9, Ueta et al. 2004/0126609 discloses an iron powder (particle) coated with an insulating substance (Paragraph 41) which include a metal compound containing aluminum (Paragraph 75). Ueta et al. '609 does not disclose an absolute value of heat generated when a primary compound is produced by a reaction between said at least one selected from the group consisting of aluminum, chromium, silicon, titanium, vanadium and nickel said nonferrous metal and at least one of oxygen and carbon included in said insulating upper film is greater than an absolute value of heat generated when a primary compound is produced by a reaction between iron and said at least one of oxygen and carbon. However, examiner interprets that this would necessarily be an inherent characteristic of the coating as both applicant and Ueta et al. disclose an iron powder with a layer of aluminum. The aluminum layer would oxidize in the presence of air producing an aluminum oxide layer; thereby producing applicant's insulating upper film containing at least one of carbon and oxygen. The oxide layer is produced by a reaction with the atmosphere and would inherently be present and have

a similar absolute value of heat generated. It has been held that where claimed and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes, the burden of proof is shifted to applicant to show that prior art products do not necessarily or inherently possess characteristics of claimed products where the rejection is based on inherency under 35 USC §102 or on prima facie obviousness under 35 USC §103, jointly or alternatively. *In re Best, Bolton, and Shaw*, 195 USPQ 430. (CCPA 1977).

As to Claim 4 & 12, Ueta et al. 2004/0126609 teaches a multilayer coating comprising aluminum and phosphorous compounds (Paragraph 88).

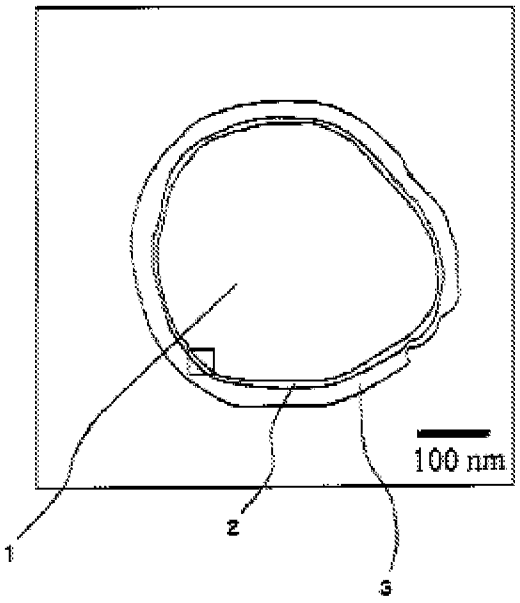
As to Claim 6 & 14, Ueta et al. 2004/0126609 discloses the use of coated powder used as a magnetic core (dust core) (Paragraph 111).

As to Claim 7 & 15, Ueta et al. 2004/0126609 discloses using polymeric resistant films and organic substances such as epoxy resin, phenolic resin, silicone resin, amide resin, and (Paragraph 108) and discloses the use of polyamide (see table 1) (Paragraph 134-135). Ueta '609 teaches molding the particles together (Paragraph 119 & 120) and would meet the limitations of the claim.

> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. Claims 1, 3-9, & 11-15 rejected under 35 U.S.C. 102(a) as being anticipated by Kaneko et al. US 7,285,329.

As to Claim 1, 3, 5, 11 & 13 Kaneko et al. US 7,285,329 discloses an iron powder inner core (particle) (Col. 8, Line 28-33) coated with an innermost layer (i.e. applicant's lower film) utilizing a carbon or nitride and consisting of Si, V, Ti, Al, Nb, Zr, and Cr. The layer thicknesses are controlled by adding electrolyte to the solution and have a preferred thickness of 5 to 400 nm for the silicon oxide layer depending on the desired saturation magnetization (Col. 13, Line 39-50). The layer thickness of the inner carbon layer is less than 100nm (Col. 3, Line 38-41). Kaneko et al. '329 illustrate a ferromagnetic particle with a multilayered coating where 1= iron core, 2 = carbon layer and 3= silicon oxide layer as shown below:



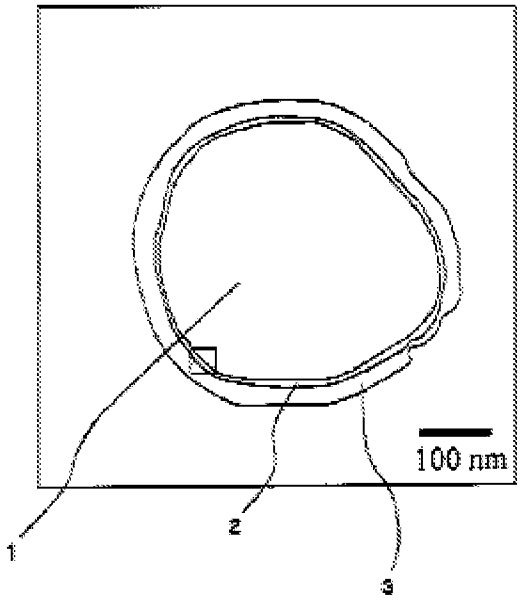
As to Claim 4 & 12, Kaneko et al. '329 discloses the use of silicon alkoxide and hydrolyzing alumina, titania, and zirconia (Col. 11, Line 37-62).

As to Claim 6 & 14, Kaneko et al. '329 discloses a metal core that would be capable of being used as a dust core (Col. 1, Line 1-64).

Claim Rejections - 35 USC § 103

5. Claims 3, 5, 11 & 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueta et al. 2004/0126609 as applied to claim 1 & 9 above, and further in view of Kaneko et al. US 7,285,329.

As to Claim 3, 5, 11 & 13 Ueta et al. 2004/0126609 does not disclose the thicknesses of the outer and inner layers. However, Kaneko et al. US 7,285,329 discloses an iron powder inner core (particle) (Col. 8, Line 28-33) coated with an innermost layer utilizing a carbon or nitriding and consisting of Si, V, Ti, Al, Nb, Zr, and Cr. The layer thicknesses are controlled by adding electrolyte to the solution and have a preferred thickness of 5 to 400 nm depending on the desired saturation magnetization (Col. 13, Line 39-50). The layer thickness of the inner carbon layer is less than 100nm (Col. 3, Line 38-41). Kaneko et al. '329 illustrate a ferromagnetic particle with a multilayered coating where 1= iron core, 2 = carbon layer and 3= silicon oxide layer as shown below:



These layers would be optimized by one skilled in the art by varying the concentration and time in the electrolyte solution and would be a results effective variable MPEP 2144.05 that would be optimized by one of ordinary skill in the art through routine experimentation to adjust the saturation magnetization of the desired particle.

6. Claims 7 & 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaneko et al. US 7,285,329 as applied to claims 1 & 9, and further in view of Ueta et al. 2004/0126609.

As to Claims 7 & 15, Kaneko et al. 329 discloses the use of resin layers and the use of polystyrene (Col. 13, 14, Line 57-67, 1-3) but does not disclose a polyethylene resin, a silicone resin, a polyamide resin, a polyimide resin, a polyamide imide resin, an

epoxy resin, a phenolic resin, an acrylic resin and a polytetrafluoroethylene. However, Ueta et al. 609 discloses using polymeric resistant films and organic substances such as epoxy resin, phenolic resin, silicone resin, amide resin, and (Paragraph 108) and discloses the use of polyamide (see table 1) (Paragraph 134-135). It would have been obvious to select a resin from the list of those disclosed by Ueta '609 in order to utilize the advantages of a polymeric resistant film. Additionally, the polymeric layer would be obvious to modify by one of ordinary skill in the art.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GARY D. HARRIS whose telephone number is (571)272-6508. The examiner can normally be reached on 8AM - 5PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Tarazano can be reached on 571-272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Gary D. Harris/
Examiner, Art Unit 1794

/Kevin M Bernatz/
Primary Examiner, Art Unit 1794

March 16, 2009